

RP 1478

Pests of Sorghum and Pearl Millet, and their Parasites and Predators, Recorded at ICRISAT Center, India up to August 1979

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FOREWORD

This document lists mite and insect pests, along with their parasites and predators, found on sorghum and pearl millet at ICRISAT Center, located about 25 kilometers northwest of Hyderabad in Andhra Pradesh, India. A brief list of mammalian pests is also included. This publication is intended generally as a comparative listing for entomologists and other cereals scientists working throughout the semi-arid tropics. It is hoped that it will be of use in pinpointing differences in the pest and predator/parasite spectrum in the various sorghum and millet growing areas and that exchange of information will be facilitated thereby. The listing is organized into sections of pests of growing plants, noninsect pests of growing plants, and pests of stored grain and produce. The listing concludes with parasites and predators noted at ICRISAT Center.

Please note that identification of the starred (*) entries has been confirmed by taxonomists of the Commonwealth Institute of Entomology of the British Museum. We are exceptionally grateful to the Institute and to the Museum for this assistance. We are also very appreciative of our own entomology staff members, who spent many hours collecting and preparing the specimens.

This publication supersedes Progress Report Cereals Entomology I, entitled "Pests of Sorghum and Pearl Millet, and their Parasites and Predators, Recorded at ICRISAT Center, India up to December 1977."

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1. INSECT PESTS OF THE GROWING SORGHUM CROP

ORDER: Diptera FAMILY: Agromyzidae

1. *Cerodontha sp. nr. denticornis (Panzer) STATUS: Minor
Leaf miner. Genus common in SAT.

ORDER: Diptera FAMILY: Cecidomyiidae

2. *Contarinia sorghicola Coq. STATUS: Major
Destroys developing seed. Important source
of crop loss, particularly in areas where
sowing is staggered or mixed-maturing cul-
tivars are grown. Very common throughout
the SAT, including the Americas and Aus-
tralia.

ORDER: Diptera FAMILY: Muscidae

3. *Acritochaeta orientalis Schiner STATUS: Minor
Causes deadheart and death of seedlings.
Suspected of being saprophytic.
4. *Atherigona approximata Malloch STATUS: Minor
5. *Atherigona atripalpis Malloch STATUS: Minor
6. *Atherigona eriochloae Malloch STATUS: Minor
7. *Atherigona falcata Thomson STATUS: Minor
8. *Atherigona pulla Wiedemann STATUS: Minor
9. *Atherigona punctata Karl STATUS: Minor
10. *Atherigona reversura Villeneuve STATUS: Minor
11. *Atherigona nr. reversura sp.n. STATUS: Minor
12. *Atherigona simplex Thomson STATUS: Minor
Causes deadheart and death of seedlings.
Genera common in SAT.

*Identity has been confirmed by specialists
and entered into the ICRISAT collection.

13. *Atherigona soccata Rondani STATUS: Major
Causes deadheart and death of seedlings. A
very common pest in SAT. Can be very severe
in some seasons, especially on late-sown
crop. Absent in North and South
America and Australia.

ORDER: Lepidoptera Family: Arctiidae

14. *Amsacta albistria Walk. STATUS: Minor
15. *Amsacta lineola F. STATUS: Minor
Defoliators. Locally important on other
crops. Genus common in SAT.
16. *Chionaema sp. STATUS: Minor
Defoliator.
17. *Estigmene lactinea Cram. STATUS: Minor
Defoliator; locally important. Genus
common in SAT.

ORDER: Lepidoptera FAMILY: Eupterotidae

18. *Eupterote translata Swinhoe STATUS: Minor
Defoliator. Genus common.

ORDER: Lepidoptera FAMILY: Galleriidae

19. Stenachroia elongella Hampsh. STATUS: Minor
Destroys grain in the head. Occasionally
causes considerable damage.

ORDER: Lepidoptera FAMILY: Hesperidae

20. *Pelopidas mathias F. STATUS: Minor
21. *Telicota colon-colon F. STATUS: Minor
22. *Telicota sp.? linna Evans STATUS: Minor
Defoliators. Leaves folded longitudinally and
scraped patches in such places.
Genera common in SAT.

ORDER: Lepidoptera FAMILY: Lymantriidae

23. *Dasychira mendosa Hb. STATUS: Minor
Defoliator. Genus common in SAT.

24. *Euproctis sp.? subnotata walker STATUS: Minor
25. *Portnebia xanthorrhoea Coll. STATUS: Minor
Destroy grain in head.
Genera common in SAT.

26. *Psalis pennatula F. STATUS: Minor
Defoliator.
Genus common in SAT.

ORDER: Lepidoptera FAMILY: Noctuidae

27. *Adisura stigmatica warr. STATUS: Minor
Defoliator. Genus common in SAT.

28. *Agrotis ippsilon Hufnagel STATUS: Minor
29. *Agrotis segetum Denis & Schiff. STATUS: Minor
Cutworms. Nibble plants at ground level.
Serious in some seasons. Common in SAT.

30. *Celama analisa Wileman & West STATUS: Minor
Destroys grain in the head. A cosmopolitan
polyphagous pest of importance.

31. *Eublemma siliculana Swinhoe STATUS: Minor
Destroys grain in the head. Common in SAT.

32. *Heliothis armigera Hb. STATUS: Minor
Destroys grain in the head. Found on a
range of crops, weeds, etc.

33. *Hiccoda nigripalpis walk. STATUS: Minor
Defoliator.

34. *Mythimna loreyl Dup. STATUS: Minor
Defoliator.

35. *Mythimna separata walk. STATUS: Minor
Defoliator. Occasionally feeds on grain in the
head. Common in SAT. Can be locally seasonally
serious.

36. *Pericyma glaucianans Guenee STATUS: Minor
Stem borer? Genus common in SAT.

37. *Sesamia inferens walk. STATUS: Minor
Causes deadheart and stalk lodging. A poten-
tially important pest. Severe on cereals
in some areas.

38. *Simplicia claneusalis Walker STATUS: Minor
Stem borer? Genus common in SAT.

39. *Simplicia sp.nr. rectalis Eversm. STATUS: Minor
Defoliator. Genus common in SAT.

40. *Spodoptera exigua Hb. STATUS: Minor
Defoliator. Common widespread occurrence on
a range of cereal crops in SAT.

ORDER: Lepidoptera FAMILY: Notodontidae

41. *Phalera combusta Walk. STATUS: Minor
Defoliator.

ORDER: Lepidoptera FAMILY: Nymphalidae

42. *Melanitis leda L. STATUS: Minor
Defoliator. Genus common in SAT.

ORDER: Lepidoptera FAMILY: Pyralidae

43. *Chilo partellus Zell. STATUS: Major
Some leaf feeding; also causes deadheart
and stalk lodging. Common pest in Asia
and East Africa. Very important source of
crop loss.

44. *Cryptoblabes gnidiella Mill. STATUS: Minor

45. *Dichocrocis punctiferalis Gn. STATUS: Minor
Destroy grain in the head.
Genera common in SAT.

46. *Marasmia suspicalis Walk. STATUS: Minor
Defoliator (leaf roller). Common in SAT. Found
on a range of cereal crops.

47. *Pyrausta machaeralis Walk. STATUS: Minor
Defoliator. Genus common in SAT.

ORDER: Lepidoptera FAMILY: Tortricidae

48. *Eucosma critica Meyr. STATUS: Minor
Defoliator. Common on pigeonpea. Genus
common in SAT.

ORDER: Hemiptera FAMILY: Aphididae
49. Longuinguis seccheari Znt. STATUS: Minor
Sucks plant sap. Common in SAI. Locally
severe.

50. Rhopalosiphum maidis (Fitch) STATUS: Minor
Sucks plant sap. Common in SAI. Locally severe
in some seasons.

ORDER: Hemiptera FAMILY: Aprocphoridae
51. Poophilius costalis walk. STATUS: Minor
Secretes a foamy spittlelike fluid and lives
hidden inside the spit. Can attain high
numbers in late or staggered plantings.
Genus common in SAI.

ORDER: Hemiptera FAMILY: Cicadellidae
52. Cicadella spectra Dist. STATUS: Minor
Sucks plant sap. Genus common in SAI.

ORDER: Hemiptera FAMILY: Coreidae
53. Cletus sp. STATUS: Minor
54. Cletus signatus walk. STATUS: Minor
Suck plant sap.
Genus common in SAI.

55. Homoeocerus prominulus (Dallas) STATUS: Minor
56. Leptocoris sp. STATUS: Minor
57. Blorhyssus hyalinus (Fabricius) STATUS: Minor
Feed on developing seeds.
Genera common in SAI.

ORDER: Hemiptera FAMILY: Delphacidae
58. Peregrinus sp. STATUS: Minor
Sucks plant sap. Locally severe, common in SAI.

ORDER: Hemiptera FAMILY: Fulgoridae
59. Pyrrilla perpusilla (walk.) STATUS: Minor
Sucks plant sap. Common in SAI.

ORDER: Hemiptera FAMILY: Lygaeidae

60. *Elasmodonus sordidus (Fabr.) STATUS: Minor
61. *Graptostethus servus (Fabr.) STATUS: Minor
62. *Oxycarenus sp. STATUS: Minor
63. *Peromys sp. STATUS: Minor
64. *Spilostethus sp. STATUS: Minor
Feed on developing seeds. Exact status as
pests unknown.
Genera common.

ORDER: Hemiptera FAMILY: Miridae

65. *Calocoris angustatus Leth. STATUS: Major
Feeds on developing seed, causing smaller or
shrivelled seeds or "chaffy" heads. Of local
significance, can be serious in India.
66. *Creontiades sp. STATUS: Minor
67. *Eurystylus bellevoeyi (Reuter) STATUS: Minor
68. *Stenotus sp. STATUS: Minor
Feed on developing seed.
Genera common in SAT.

ORDER: Hemiptera FAMILY: Pentatomidae

69. *Acrosternum graminea (Fabr.) STATUS: Minor
Sucks plant sap. Genus common in SAT.
70. *Bagrada hilaris (Burm.) STATUS: Minor
Sucks plant sap. Common in SAT. Normally
found on cruciferae.
71. *Chrysocoris purpureus westw. STATUS: Minor
Sucks plant sap.
72. *Dolycoris indicus Stal STATUS: Minor
Sucks plant sap. Genus common in SAT.
73. *Menida sp. STATUS: Minor
Sucks plant sap. Genus common in SAT.
74. *Nezara viridula (L.) STATUS: Minor
Sucks sap from developing grain, leaves, and
tender stems. Found on a range of crops.
Common in SAT.

75. *Piezodorus hybneri (Gmelin) STATUS: Minor
76. *Tessaratomia sp.? papillosa (Dru.) STATUS: Minor
Suck plant sap.
Genera common in SAT.

ORDER: Hemiptera FAMILY: Pyrrhocoridae

77. *Dysdercus sp. STATUS: Minor
78. *Dysdercus koenigi (Fabr.) STATUS: Minor
Feed on developing seed and suck sap from
plants. Very common in malvales. Genus
common in SAT.

ORDER: Orthoptera FAMILY: Acrididae

79. *Acrida exaltata walker STATUS: Minor
80. *Acrotylus humberti Sauss. STATUS: Minor
Defoliators.
Genera common in SAT.

81. *Aiolopus simulatrix simulatrix walk. STATUS: Minor
Defoliator. Can be a serious pest of seed-
ling sorghum, locally, especially in Africa.
Genus common in SAT.

82. *Atractomorpha crenulata Fabr. STATUS: Minor
83. *Catantops erubescens walk. STATUS: Minor
Defoliators.
Genera common in SAT.

84. *Chrotogonus trachypterus Kevan STATUS: Minor
Defoliator. Can be serious on seedling
sorghum. Genus common in SAT.

85. *Colemania sphenarioides Bol. STATUS: Minor
Defoliator.

86. *Cyrtacanthacris tatarica (L.) STATUS: Minor
87. *Eyprepocnemis alacris alacris Serville STATUS: Minor
88. *Gastrimargus africanus Saussure STATUS: Minor
89. Hieroglyphus nigrorepletus Bol. STATUS: Minor
Defoliators.
Genera common in SAT.

90. *Pyrgomorpha bispinosa walker STATUS: Minor
Defoliator. Genus common in SAT.

91. *Patanga succincta (L.) STATUS: Minor
Can be serious locally in Asia. Genus common in SAT.

92. *Uxya nitidula (walker) STATUS: Minor
Defoliators. Serious in some seasons.

ORDER: Coleoptera FAMILY: Chrysomelidae

93. *Altica coerules (Olivier) STATUS: Minor
Defoliator. Genus common in SAT.

94. *Aulacophora intermedia Jac. STATUS: Minor
Defoliator. Genus common in SAT.

95. *Aulacophora nilgiriensis Jac. STATUS: Minor
Defoliator. Usually on cucurbits. Genus common in SAT.

96. *Chaetocnema minuta Jac. STATUS: Minor

97. *Chaetocnema concinnipennis Baly STATUS: Minor
Defoliators. Can be locally severe on seedling sorghum.

98. *Picladispa armigera (Oliv.) STATUS: Minor
Defoliator. Genus common in SAT.

99. *Gen. nr. Mimastra STATUS: Minor

100. *Monolepta signata Ul. STATUS: Minor
Defoliators. Genus common in SAT.

ORDER: Coleoptera FAMILY: Curculionidae

101. *Phyllobius sp. STATUS: Minor

102. *Irachyodes sp. STATUS: Minor
Defoliators. Polyphagous pests.

ORDER: Coleoptera FAMILY: Meloidae

103. *Cylindrothorax audouini (Haag-R.) STATUS: Minor

104. *Cylindrothorax tenuicollis (Pallas) STATUS: Minor

105. *Mylabris pustulata (Thunb.) STATUS: Minor

106. *Psalydolytta atricollis (Pic.) STATUS: Minor
Adults feed on pollen.
Common in SAT.

ORDER: Coleoptera FAMILY: Melyridae (Prionocerinae)

107. *Idagia assimilis (Hope) STATUS: Minor
Adults feed on pollen and grain.

ORDER Coleoptera FAMILY: Melyridae (Dasytinae)

108. *Gen. & sp. Incoq. STATUS: Minor
Adults feed on pollen and grain.

ORDER: Coleoptera FAMILY: Phalacridae

109. *Phalacrus corvinus Guille STATUS: Minor
Defoliator. Genus common.

ORDER: Coleoptera FAMILY: Scarabaeidae

110. *Anatona stillata (Mewm.) STATUS: Minor
111. *Anthracophora crucifera (Ol.) STATUS: Minor
112. *Chiloloba acuta (Wied.) STATUS: Minor
113. *Oxycetonia versicolor (F.) STATUS: Minor
Adults feed on pollen and grain.
Genus common in SAT.

ORDER: Coleoptera FAMILY: Tenebrionidae

114. *Gonocephalum dorsigranatum Frm. STATUS: Minor
115. *Gonocephalum vagum Stev. STATUS: Minor
Adult beetles nibble young plants
causing gaps. Genus common in the SAT.

ORDER: Hymenoptera FAMILY: Formicidae

116. *Monomorium indicum Forel STATUS: Minor
Feeds on and removes planted seeds. Common in SAT.

ORDER: Thysanoptera FAMILY: Phlaeothripidae

117. *Haplothrips ganglbaueri Schmutz STATUS: Minor
Feeds on developing seed. Common in SAT.

1. INSECT PESTS OF THE GROWING PEARL MILLET CROP

ORDER Diptera FAMILY: Muscidae

1. *Atherigone approximata Malloch STATUS: Minor
Causes deadheart and death of seedlings. Is
of considerable and increasing potential
importance. Genus common in SAT.

2. *Atherigone soccata Rondani STATUS: Minor
Very common pest of sorghum in SAT.

ORDER: Lepidoptera FAMILY: Arctiidae

3. *Amsacta albistella Walk. STATUS: Minor
4. *Estigmene lacticne Cram. STATUS: Minor
Defoliators. Locally important.
Genera common in SAT.

ORDER: Lepidoptera FAMILY: Eupterotidae

5. *Eupterote translata Swinnoe STATUS: Minor
Defoliator. Genus common.

ORDER: Lepidoptera FAMILY: Hesperidae

6. *Pelopidas mathias F. STATUS: Minor
7. *Telicota colon-colon F. STATUS: Minor
Defoliators. Leaves folded longitudinally
and scraped patches in such places.
Genera common in SAT.

ORDER: Lepidoptera FAMILY: Lymantridae

8. *Dasychnira mendosa Hb. STATUS: Minor
Defoliator. Genus common.
9. *Euproctis sp.? subnotata Walker STATUS: Minor
10. Porthesia xanthorhoea Coll. STATUS: Minor
Destroy grain in the head.
Genera common in SAT.

*Identity has been confirmed by specialists
and entered into the ICHISAT collection.

11. *Psalis pennatula F. STATUS: Minor
Defoliator. Genus common in SAT.
- ORDER: Lepidoptera ORDER: Noctuidae
12. *Agrotis ipsilon Huignel STATUS: Minor
13. *Agrotis segetum Denis & Schiff. STATUS: Minor
Cutworms. Nibble plants, particularly seedlings at ground level. Serious in some seasons. Common in SAT.
14. *Celama analis wileman & west STATUS: Minor
Destroys grain in the head. A cosmopolitan polyphagous pest of importance.
15. *Eublemma siliculana Swinhoe STATUS: Minor
Destroys grain in head. Common in SAT.
16. *Heliothis armigera Hb. STATUS: Minor
Destroys grain in head. Common in SAT. Found on a range of crops, weeds, etc.
17. *Mythimna loreyi Dup. STATUS: Minor
18. *Mythimna separata walk. STATUS: Minor
Defoliators. Can be locally severe. Common in SAT.
19. *Sesamia inferens walk. STATUS: Minor
Causes deadheart and stalk lodging. Genus common in SAT. A potentially severe pest in some areas.
- ORDER: Lepidoptera FAMILY: Pyralidae
20. *Chilo partellus Zell. STATUS: Minor
Some leaf feeding; also causes deadheart and stalk lodging. Common pest of sorghum in Asia and in Africa. Potentially a source of crop loss.
21. *Cryptoblabes gnidiella Mill. STATUS: Minor
Destroys grain in head. Common in SAT
22. *Lamoria adaptella walk. STATUS: Minor
Borer ??
23. *Laxostege massalis walk. STATUS: Minor
Causes deadheart ??

24. *Marasmia suspicalis walk. STATUS: Minor
Defoliator (leaf roller). Common in SAT.
Found on a range of cereal crops.

25. *Pyrausta nacheaeralis walk. STATUS: Minor
Defoliator. Genus common in SAT.

ORDER: Hemiptera FAMILY: Aphididae

26. *Rhopalosiphum maidis (Fitch) STATUS: Minor
Sucks plant sap. Common in SAT. Locally
severe in some seasons.

27. *Rhopalosiphum rutiabdominalis (Sas) STATUS: Minor
Root aphid. Common in SAT.

ORDER: Hemiptera FAMILY: Coreidae

28. *Cletus sp. STATUS: Minor
29. *Cletus signatus walk. STATUS: Minor
Suck plant sap. Genus common in SAT.

30. *Leptocoris sp. STATUS: Minor
Feeds on developing seed. Genus common
in SAT.

ORDER: Hemiptera FAMILY: Delphacidae

31. *Peregrinus sp. STATUS: Minor
Sucks plant sap. Locally severe. Genus
common in SAT.

ORDER: Hemiptera FAMILY: Fulgoridae

32. *Pyrilla perpusilla walk. STATUS: Minor
Sucks plant sap. Common in SAT.

ORDER: Hemiptera FAMILY: Lygaeidae

33. *Graptostethus servus Fabr. STATUS: Minor
34. *Oxycarenus sp. STATUS: Minor
Feed on developing seed.
Genera common in SAT.

ORDER: Hemiptera FAMILY: Miridae

35. *Calocoris angustatus Leth. STATUS: Minor
Feeds on developing seed. Potentially
important source of crop loss. Genus
common in SAT.

ORDER: Hemiptera FAMILY: Pentatomidae

36. *Bagrada hilaris (Burm.) STATUS: Minor
Sucks plant sap. Common in SAT. Normally
found on Cruciferae.
37. *Dolycoris indicus Stal STATUS: Minor
Sucks plant sap. Genus common in SAT.
38. *Menida sp. STATUS: Minor
Sucks plant sap. Genus common in SAT.
39. *Nezara viridula (L.) STATUS: Minor
Sucks sap from developing grain and tender
stem. Found on a range of crops. Common in
SAT.
40. *Piezodorus hybneri (Gmelin) STATUS: Minor
41. *Tessaratoma sp.? papillosa (Oru.) STATUS: Minor
Suck plant sap.
Genera common in SAT.

ORDER: Hemiptera FAMILY: Pyrrhocoridae

42. *Dysdercus koenigi (Fabr.) STATUS: Minor
Feeds on developing seed and sucks plant
sap. Very common on malvaies. Common
in SAT.

ORDER: Orthoptera FAMILY: Acrididae

43. *Acrotylus humbertiames Sauss STATUS: Minor
Defoliator. Genus common in SAT.
44. *Aiolopus simulatrix simulatrix (Walk.) STATUS: Minor
Defoliator. Can be a serious pest of
seedlings. Common in SAT.
45. *Catantops erubescens Walk. STATUS: Minor
Defoliator. Genus common in SAT.

46. *Chrologonus trachypterus Kevan
Defoliator. Can be serious on seedlings.
Genus common in SAT. STATUS: Minor

47. *Colemania sphenerioides Bol.
Defoliator. STATUS: Minor

48. *Cyrtacanthecris tatarica (L.) STATUS: Minor
49. *Eyprepocnemis elacris Serville STATUS: Minor
50. *Gastrimargus africanus Saussure STATUS: Minor
51. *Hieroglyphus nigrorepletus Bol. STATUS: Minor
52. *Pyrgomorpha bispinosa Walker.
Defoliators. STATUS: Minor
Genera common in SAT.

53. *Patanga succincta (L.) STATUS: Minor
Defoliator. Serious in some seasons
Common cereal pest in Asia.

54. *Uxya nitidula (Walker)
Defoliator. STATUS: Minor

ORDER: Coleoptera FAMILY: Chrysomelidae
55. *Aulacophora intermedia Jac. STATUS: Minor
56. *Aulacophora nilgiriensis Jac. STATUS: Minor
Defoliators. Genus common in SAT.

57. *Dicladispa armigera (Oliv.) STATUS: Minor
58. *Monolepta signata Ol. STATUS: Minor
Defoliators. Locally serious.
Genera common in SAT.

ORDER: Coleoptera FAMILY: Curculionidae
59. *Phylllobius sp. STATUS: Minor
Defoliator. A polyphagous pest. Genus
common in SAT.

ORDER: Coleoptera FAMILY: Meloidae
60. *Cylindrothorax audouini (Hagg-R.) STATUS: Minor
61. *Cylindrothorax tenuicollis (Pallas) STATUS: Minor
62. *Mylabris pustulata (Thunb.) STATUS: Minor
63. *Psalydolytta atricollis (Pic.) STATUS: Minor
Adults feed on pollen. Status as pests not
fully evaluated. Very common in SAT.

ORDER: Coleoptera FAMILY: Melolonthidae

64. Holotrichia Sp. STATUS: Minor
Grubs feed on roots and kill plants.
Common. Occasionally very serious locally.

ORDER: Coleoptera FAMILY: Scarabaeidae

65. *Chiloloba acuta(wied). STATUS: Minor
Adults feed on pollen grain.

66. *Oxycetonia versicolor (F.) STATUS: Minor
Adults feed on pollen and developing grain.
Genus common in SAT.

ORDER: Coleoptera FAMILY: Tenebrionidae

67. *Gonocephalum vagum Stev. STATUS: Minor
Adult beetles nibble young plants
causing gaps. Genus common in the SAT.

ORDER: Hymenoptera FAMILY: Formicidae

68. *Monomorium indicum Forel STATUS: Minor
Removes seed from plot rows and stores it
near nest, causing low plant populations.
Common in SAT.

ORDER: Thysanoptera FAMILY: Thripidae

69. Thrips STATUS: Minor
feed on developing seed.

III. NON-INSECT PESTS OF SORGHUM
AND PEARL MILLET

ORDER: Acarina FAMILY: Tetranychidae

1. Oligonychus indicus Hirst. STATUS: Minor
Sucks plant sap. Common pest, potentially destructive if entry into crop is early. Can be severe in late and second season sowings.
2. Unidentified mite STATUS: Minor
Sucks plant sap, causing discoloration and death of leaves.

CLASS: Aves

3. Birds
 - i) Baya weaver Ploceus philippinus Linn.
 - ii) Crow Corvus splendens Vieillot
 - iii) Myna Acridotheres tristis Linn.
 - iv) Parakeet Psittacula krameri Scopoli
 - v) Pigeon Columba livia Gmelin.
 - vi) Sparrow Passer domesticus Linn.Grain eaters. Can be serious sources of crop loss locally. Sporadic and migratory in the SAT.

CLASS: Diploida

4. Millipede (Ktenostreptus sp.)? STATUS: Minor
Clips seedlings off at soil surface.

ORDER: Rodentia FAMILY: Muridae

5. Rat STATUS: Major
Field and store pest. Cosmopolitan.

IV. PESTS OF STORED SORGHUM AND
PEARL MILLET GRAIN AND PRODUCTS

ORDER: Lepidoptera FAMILY: Galleridae

1. Corcyra cephalonica Staint. STATUS: Minor
Feeds primarily on cracked grain or grain
damaged by other stored-grain pests.
Cosmopolitan.

ORDER: Lepidoptera FAMILY: Phycitidae

2. Plodia interpunctella Hubn. STATUS: Minor
Feeds primarily on cracked grain or grain
damaged by other stored-grain pests.
Cosmopolitan.

ORDER: Lepidoptera FAMILY: Pyralidae

3. Sitotroga cerealella Ul. STATUS: Major
Consumes endosperm. Very important and
very common pest of stored grain.
Cosmopolitan.

ORDER: Coleoptera FAMILY: Bostrychidae

4. Rhizopertha dominica Fab. STATUS: Minor
Consumes whole grain. Can be very severe
locally in some drier areas. Cosmo-
politan.

ORDER: Coleoptera FAMILY: Silvanidae

5. Uryzaeophilus mercator Fauv. STATUS: Minor
6. Uryzaeophilus surinamensis L. STATUS: Minor
Feed primarily on cracked grain or grain
damaged by other stored-grain insects.
Cosmopolitan.

ORDER: Coleoptera FAMILY: Curculionidae

7. Sitophilus oryzae L. STATUS: Major
Consumes whole grain. Common pest of stored
grain; very important. Cosmopolitan.

ORDER: Coleoptera FAMILY: Tenebrionidae

8. Tribolium castaneum Herbst. STATUS: Minor
Feeds on cracked as well as on whole grain
or grain damaged by other stored-grain
pests. Cosmopolitan.

ORDER: Acarina FAMILY: Tyroglyphidae

9. Acarus siro L. STATUS: Minor
Feeds primarily on cracked grain or grain
damaged by other stored-grain insects. Com-
mon storage pest.

ORDER: Rodentia FAMILY: Muridae

10. Rat STATUS: Major
Consumes grain and cereal products, and
spills larger quantities than consumed.
Cosmopolitan.

V. PARASITES AND PREDATORS OF INSECT PESTS
OF SORGHUM AND PEARL MILLET
AT ICHISAT CENTER

PARASITES of *Atherigona soccata Rond
ORDER: Hymenoptera FAMILY: Eulophidae

1. *Crataepiella sp.
Attacks pupal stage.
2. *Tetrastichus nyemitawus Rohwer
Attacks larval stage.

PREDATOR of *Atherigona soccata Rond.
SUBORDER: Proctigmata SUPERFAMILY: Erythraeidae

1. *Abrolophus sp.
Predatory on eggs and early larvae.
A new record.

PARASITES of *Chilo partellus Zell.
ORDER: Diptera FAMILY: Tachinidae

1. *Carcellia (Carcellia) sp.
Attacks larval stage. A new host record.
2. *Halidayia luteicornis (Walk.)
Attacks larval stage.
3. *Pseudalsomyia sp.
Attacks larval or pupal stage.
4. *Sturmiopsis interens Ins.
Attacks larval stage.
5. *Inelaira sp.
Attacks larval stage. First record
from Oriental region.

ORDER: Hymenoptera FAMILY: Braconidae

6. *Apanteles flavipes Cam.
Attacks larval stage.

*Identity has been confirmed by specialists
and entered into the ICRISAT collection.

7. *Bracon albolineatus Cam.
8. *Bracon chinensis Szepi.
Attack larval stage.
9. *Glyptomorpha deesae Cameron
Attacks pupal stage.

ORDER: Hymenoptera FAMILY: Ichneumonidae

10. *Trathala flavoorbitalis (Cam.)
Attacks larval stage.
11. *Xanthopimpla stemmator Thunberg
Attacks pupal stage.

ORDER: Hymenoptera FAMILY: Chalcididae

12. *Hyperchalcidia soudanensis Steffan
13. *Invreia sp.
Attack pupal stage.

ORDER: Hymenoptera FAMILY: Eulophidae

14. *Tetrastichus ayyari Rohwer
Attacks pupal stage.

ORDER: Hymenoptera FAMILY: Trichogrammatidae

15. *Trichogramma confusum Viqgiani
Attacks egg stage.

PREDATOR of *Chilo partellus Zell.

ORDER: Coleoptera FAMILY: Coccinellidae

1. *Menochilus sexmaculatus (F.)
Attacks newly hatched larvae.

PARASITES of *Contarinia sorghicola Coq.

ORDER: Hymenoptera FAMILY: Braconidae

1. *Apanteles sp. (Uitor group)
Emerges from midge-infested heads. Attacks
larval stage.

ORDER: Hymenoptera FAMILY: Eupelmidae

2. *Eupelmus popa Girault
Emerges from midge-infested heads. Attacks
larval or pupal stage.

3. *Tetrastichus sp.
Emerges from midge-infested heads. Attacks
larval or pupal stage.

PREDATOR of *Contarinia sorghicola Coq.
ORDER: Diptera FAMILY: Ceratopogonidae

1. *Dasyhelea sp.

Emerges from midge-infested heads. Attacks
larval or pupal stage.

PARASITE of *Celama analis nielma & west
ORDER: Hymenoptera FAMILY: Eulophidae

1. *Tetrastichus ayyari Rohwer

Attacks larval stage.

PARASITE of Estigmene lactinea Cram.
ORDER: Hymenoptera FAMILY: Braconidae

1. *Apanteles creatonoti Vier

Attacks larval stage.

PREDATOR of *Marasmia suspicalis walk
ORDER: Coleoptera FAMILY: Carabidae

1. *Chlaenius bioculatus Cnd.

Predatory on larvae.

PARASITE of *Mythimna separata walk.
ORDER: Hymenoptera FAMILY: Ichneumonidae

1. *Metopius rufus Cameron

Attacks larval stage.

PARASITE of *Pelopidas mathias F
ORDER: Diptera FAMILY: Tachinidae

1. *Inecocarcelia sp.

Attacks pupal stage.

ORDER: Hymenoptera FAMILY: Braconidae

2. *Apanteles sp. (glomeratus group)

Attacks larval stage.

ORDER: Hymenoptera FAMILY: Chalcididae

3. *Barchymeria sp? (euploeae) (westwood)

Attacks pupal stage.

PARASITE of *Phalera combusta Walk.
ORDER: Hymenoptera FAMILY: Ichneumonidae
1. *Barylypta testacea (Mori.)
Attacks larval or pupal stage.

PARASITES of *Psalis pennatula F
ORDER: Diptera FAMILY: Tachinidae
1. *Carcellia (Carcellia sp.)
Attacks larval stage. A new host record.

ORDER: Hymenoptera FAMILY: Ichneumonidae
2. *Enicospilus sp.nr. orientalis (Uchida)
Attacks larval stage.

PREDATORS of Aphids
ORDER: Coleoptera FAMILY: Coccinellidae
1. *Illeis indica Timberlake
2. *Brumoides suturalis (F.)
3. *Menochilus sexmaculatus (F.)
Attack nymphs and adults.

ORDER: Diptera FAMILY: Syrphidae
3. *Xanthogramma scutellaris (F.)
Attacks nymphs and adults.

ORDER: Hemiptera FAMILY: Lygaeidae
4. *Geocoris sp.
Attacks nymphs and adults.

ORDER: Neuroptera FAMILY: Chrysopidae
5. *Chrysopa sp.
Attacks nymphs and adults.

PREDATOR of *Haplothrips ganglbaueri Schmutz
ORDER: Hemiptera FAMILY: Anthocoridae
1. *Urius sp.
Attacks nymphs and adults.

PREDATOR of Mites (Olygonychus indicus Hirst.)
ORDER: Coleoptera FAMILY: Coccinellidae
1. *Stetnorus pauperculus nse.
Attacks nymphs and adults.